



PTO/SB/21 (08-03)

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Application Number	10/763,885
Filing Date	January 23, 2004
First Named Inventor	Frank Y. Xu
Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	P113-55-03

Total Number of Pages in This Submission

ENCLOSURES (Check all that apply)

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Date	4/16/04

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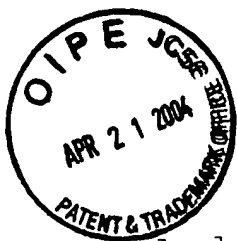
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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Xu et al.

PATENT APPLICATION

Serial No.: 10/763,885

Group Art Unit: Unassigned

Filing Date: January 23, 2004

Examiner: Unassigned

For: MATERIALS AND METHODS FOR IMPRINT LITHOGRAPHY.

INFORMATION DISCLOSURE STATEMENT

Commissioner

for Patents

Alexandria, VA 22313-1450

Sir:

The following information is submitted in compliance with Applicants' duty of disclosure under 37 C.F.R. §1.56. No item of information contained in this information disclosure statement was known to any individual designated in 37 C.F.R. §1.56 more than three (3) months prior to the filing of this information disclosure statement. Form PTO-1449 and the requisite copies of each reference recited below accompany this document. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

ISSUED PATENTS

<u>Patent Number</u>	<u>Inventor</u>	<u>Grant Date</u>
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U.S. PATENT APPLICATION PUBLICATIONS

<u>Publication Number</u>	<u>Inventor</u>	<u>Publication Date</u>
US 2002/0098426	Sreenivasan et al.	07/25/2002
US 2002/0094496	Choi et al.	07/18/2002
US 2003/0093122	Choi et al.	07/18/2002
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US 2004/0008334	Sreenivasan et al.	01/15/2004

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<u>Document No.</u>	<u>Inventor</u>	<u>Pub. Date</u>
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- Krauss, et al. "Fabrication of Nanodevices Using Sub-25nm Imprint Lithography," *Appl. Phys. Lett.*, 67(21), pp. 3114-3116, 1995.
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Ruchhoeft, P. et al. "Patterning Curved Surfaces: Template Generation by Ion Beam Proximity Lithography and Relief Transfer by Step and Flash Imprint Lithography," *Journal of Vacuum Science and Technology*, vol. 17, pp. 2965-2982, 1999.

Choi, B.J. et al. "Design of Orientation Stages for Step and Flash Imprint Lithography," *Precision Engineering*, vol. 25, pp. 192-199, 2001.

Otto et al., "Step and Repeat UV-Nanoimprint Lithography: Material Issues," Nanoimprint and Nanoprint Technology Conference, San Francisco, December 11-13, 2002

Johnson et al., "Advances in Step and Flash Imprint Lithography," SPIE Microlithography Conference, February 23-28, 2003.

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Date: April 16, 2004

Respectfully,

Kenneth C. Brooks
Reg. No. 38,393

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Substitute for form 1449A/PTO

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Complete if Known

Application Number	10/763,885
Filing Date	01/23/2004
First Named Inventor	Xu et al.
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	P113/MI-79-61-03

U.S. PATENT DOCUMENTS

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Application Number

10/763,885

Filing Date

01/23/2004

First Named Inventor

Xu et al.

Group Art Unit

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Examiner Name

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Attorney Docket Number

P113/MII-79-61-03

FOREIGN PATENT DOCUMENTS

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				Application Number	10/763,885
				Filing Date	01/23/2004
				First Named Inventor	Xu et al.
				Group Art Unit	Unassigned
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Sheet	3	of	5	Attorney Docket Number	P113/MII-79-61-03

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	A18	KRUG et al., "Fine Patterning of Thin Sol-Gel Films," Journal of Non-Crystalline Solids, 1992, pp. 447-450, vol. 147 & 148.	
	A19	Krauss et al., "Fabrication of Nanodevices Using Sub-25nm Imprint Lithography," Appl. Phys. Lett 67(21), 3114-3116, 1995	
	A20	CHOU et al., "Imprint of Sub-25 nm Vias and Trenches in Polymers," Applied Physics Letters, November 20, 1995, pp. 3114-3116, vol. 67(21).	
	A21	CHOU et al., "Imprint Lithography with 25-Nanometer Resolution," Science, Apr. 5, 1996, pp. 85-87, vol. 272.	
	A22	HAISMA et al., "Mold-Assisted Nanolithography: A Process for Reliable Pattern Replication," Journal of Vacuum Science and Technology, Nov/Dec 1996, pp. 4124-4128, vol. B 14(6).	
	A23	CHOU et al., "Imprint Lithography with Sub-10nm Feature Size and High Throughput," Microelectronic Engineering, 1997, pp. 237-240, vol. 35.	
	A24	FELDMAN et al., "Wafer chuck for manification correction in x-ray lithography," American Vacuum Society, 1998, pp. 3476-3479.	
	A25	SCHEER et al., "Problems of the Nanoimprinting Technique for Nanometer Scale Pattern Definition," Journal of Vacuum Science and Technology, Nov/Dec 1998, pp. 3917-3921, vol. B 16(6).	
	A26	COLBURN. et al., "Step and Flash Imprint Lithography: A New Approach to High-Resolution Patterning", Proc. of SPIE, 1999, pp. 379-389, vol. 3676.	
	A27	CHOU et al., "Lithographically-Induced Self Assembly of Periodic Polymer Micropillar Arrays," Journal of Vacuum Science and Technology, Nov/Dec 1999, pp. 3197-3202, vol. B 17(6).	
	A28	RUCHHOEFT et al., "Patterning Curved Surfaces: Template Generation by Ion Beam Proximity Lithography and Relief Transfer by Step and Flash Imprint Lithography," Journal of Vacuum Science and Technology, 1999, pp. 2965-2982, vol. 17.	

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				Application Number	10/763,885
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				First Named Inventor	Xu et al.
				Group Art Unit	Unassigned
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	A29	CHOI et al., "Design of Orientation Stages for Step and Flash Imprint Lithography," Precision Engineering, Journal of the International Societies for Precision Engineering and Nanotechnology, 2001, pp. 192-199, vol. 25.		
	A30	CHOI et al., "High Precision Orientation Alignment and Gap Control Stages for Imprint Lithography Processes," U.S. Patent Application 09/698,317. Filed with USPTO on October 27, 2000.		
	A31	SREENIVASAN et al., "High-Resolution Overlay Alignment Methods and Systems for Imprint Lithography," U.S. Patent Application Publication 2002/0098426. Published on July 25, 2002.		
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	A37	OTTO M. et al., "Step and Repeat UV-Nanoimprint Lithography: Material Issues," Nanoimprint and Nanoprint Technology Conference, San Francisco, December 11-13, 2002.		
	A38	JOHNSON, et al., "Advances in Step and Flash Imprint Lithography," SPIE Microlithography Conference, February 23-28, 2003.		
	A39	CHOI et al., "A Chucking System and Method for Modulating Shapes of Substrates," U.S. Patent Application 10/293,224. Filed with USPTO on November 13, 2002.		

Examiner Signature		Date Considered	
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				First Named Inventor	Xu et al.
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Sheet	5	of	5	Attorney Docket Number	P113/MII-79-61-03

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
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	A40	VOISIN, "Methods of Inspecting A Lithography Template," U.S. Patent Application 10/293,919. Filed with USPTO on November 13, 2002		
	A41	CHOI et al., "A Method For Modulating Shapes of Substrates," U.S. Patent Application 10/316,963. Filed with USPTO on December 11, 2002.		
	A42	CHOI et al., "A Conforming Template For Patterning Liquids Disposed On Substrates," U.S. Patent Application 10/614,716. Filed with USPTO on July 7, 2003.		
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Examiner Signature		Date Considered	
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